



Natural Resources Conservation Service
National Water and Climate Center
101 SW Main Street, Suite 1600
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Date: **April 8, 2003**

Subject: **April 1, 2003 Western Snowpack Conditions and Water Supply Forecasts**

The following information is provided for your use in describing climate and water supply conditions in the West as of April 1, 2003.

WATER SUPPLY OVERVIEW

As of April 1, 2003, western water supply volume forecasts improved in the Southwest, the Rockies of Colorado, Wyoming, Montana and the Columbia basin due to a very stormy March. However, because of a dry fall and winter, spring and summer water supply forecasts for most basins still range between 50% and 89% of average. The March storms missed the Intermountain West of Utah, Nevada and southeastern Oregon with forecast spring and summer streamflows expected to be less than 50% of average.

This year's water supply forecasts come on the heels last year's record low, or near record low runoff in the Southwest, Intermountain West and southern Rockies. In many of these areas, this year's low snowpack is resting on very dry soils, which generally results in reduced snowmelt runoff.

SNOWPACK

The April 1, 2003 Mountain Snowpack map (Figure 1) continues to reflect the below average snowpacks in the Intermountain West and Oregon as a result of a warmer than average winter. Significantly below average snowpacks (<50%) are reported in western and southeastern Oregon, parts of central Nevada, a small portion southwestern Utah and central Arizona where snowpacks have melted-out below 8,000 feet.

Snowpacks improved in the eastern slopes of the Rockies in Colorado and Wyoming and in the northern Rockies of Idaho and Montana during March. Several basin snowpacks in Wyoming, Colorado and Idaho edged upward to average, or slightly above average snowpack (90% to 129%). Recent storms in the Four-Corners area of the Southwest resulted in above average snowpacks (110% to 150%). Most Alaska snowpacks are significantly below, to below average (<50% to 89%). Alaska has experienced warm temperatures this winter, which have inhibited snowpack accumulation.

A map containing a daily update of the westwide snowpack may be obtained from the following URL - http://www.wcc.nrcs.usda.gov/water/w_qnty.html

SEASONAL AND MONTHLY PRECIPITATION

Seasonal precipitation (October 1, 2002 to March 31, 2003): Seasonal precipitation totals improved during the past month along the eastern slopes of the Rocky Mountains and the northern Rockies. States benefiting the most include eastern Colorado, eastern Wyoming, most of Montana, central and northern Idaho and eastern Washington (Figure 2). Many of these basins now report average, or above average totals ranging from 90% to 150% of seasonal averages. In contrast to these improvements, the Intermountain West of western Utah, Nevada, and southeastern Oregon continue to report below and well below seasonal totals, ranging from 50% to 89% of seasonal average. Northern California, the south central Sierra Mountains of California and southwestern Oregon continue to report above average seasonal totals (110% to >150%). Arizona reports seasonal totals of 50% to 69% in the south, 70% to 89% in the central sections and 90% to 109% in the west and east. Southern Alaska's seasonal precipitation is above average (>110%) with the interior reporting average or slightly below average values.

March precipitation was well above average (>129%) in eastern Colorado, parts of eastern Utah, most of Wyoming, eastern and western Montana, northern Idaho, western Washington, and western Oregon (Figure 3). The Intermountain West missed many of the March storms and several basins in Nevada, central California and southern Utah received less than 50% of average March precipitation. Alaska March precipitation was highly variable, with less than 50% of average reported in the north and south, 50% to 69% in the west, near average 90% to 109% in the south central and above average in the northwest (110% to 129%).

SPRING AND SUMMER STREAMFLOW FORECASTS

As of April 1, 2003 the Intermountain West continues to show significantly below average (<50%) spring and summer volume forecasts (Figure 4). Much of central Utah, Nevada, southeastern Idaho and eastern Oregon are forecast to receive less than 50% of average spring and summer streamflow. The Southwest and Rocky Mountain volume forecasts improved from recent storms and are forecast to receive summer streamflow of ranging between 50% and 89% of average. The Four-Corners area of the Southwest is now forecast to receive slightly above average spring and summer streamflows (110% to 129%). Alaska streamflows are forecast to be near or slightly below average.

Several low western water supply forecasts follow water year 2002's extremely low runoff for many Southwestern and Rocky Mountain basins. Specific state streamflow summaries can be obtained from the Internet location - <http://www.wcc.nrcs.usda.gov/water/snow/bor.pl>

RESERVOIR STORAGE

As of April 1, 2003, reservoir storage improved in California, Idaho, Montana and Washington to near average percent of usable content (Figure 5). All other western storage reservoirs report below seasonal averages. Idaho and Washington improved the most during the past month in response to significantly above average March precipitation. Low reservoir storage for other states reflects the carryover dryness of last year's drought in the Rockies and Southwest.

FOR MORE INFORMATION

The National Water and Climate Center Homepage provides the latest available snowpack and water supply information. Please visit us at <http://www.wcc.nrcs.usda.gov>

/s/ RON MARLOW

Director, Conservation Engineering Division, Natural Resources Conservation Division,
Washington, DC

Mountain Snowpack as of April 1, 2003

Legend

percent

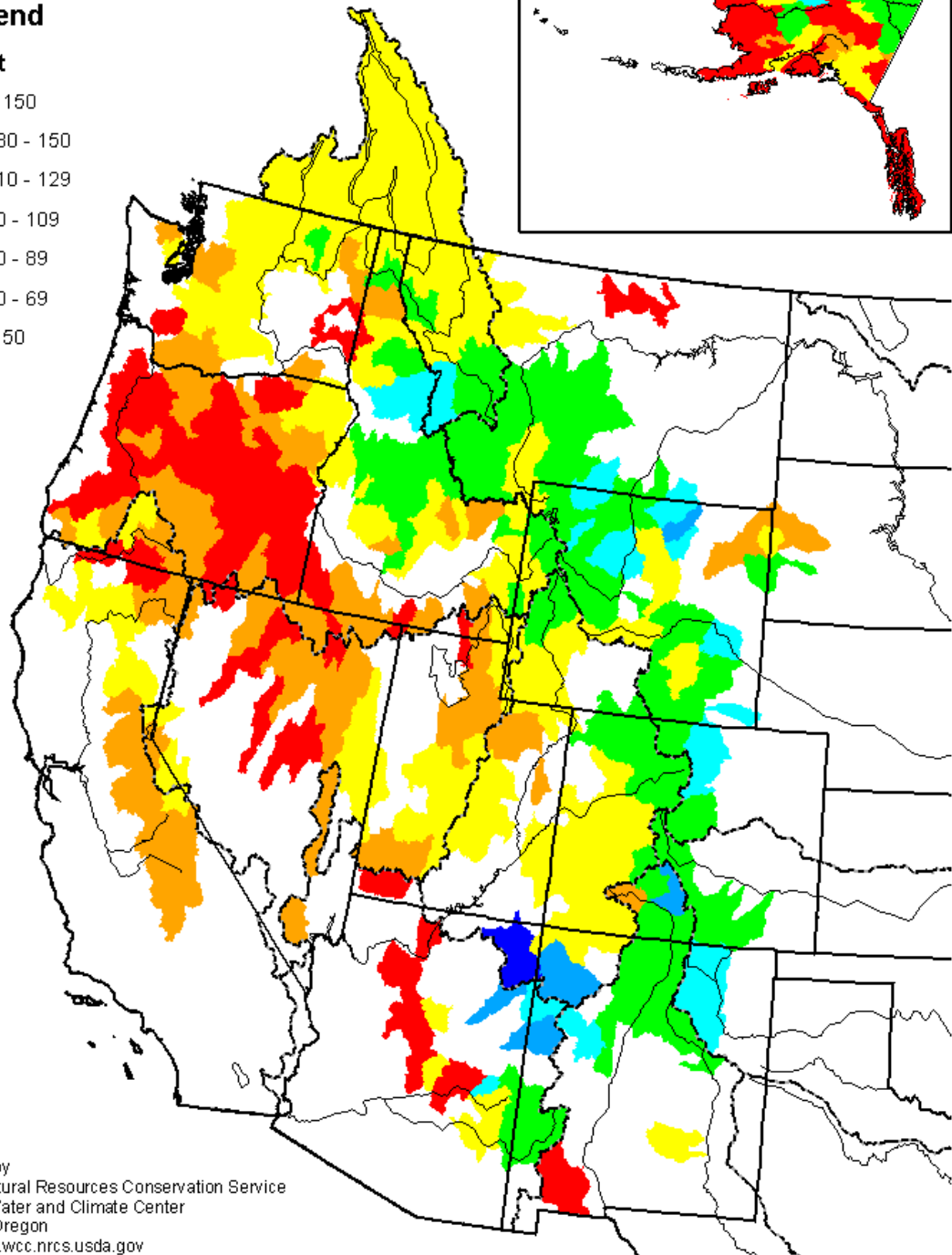


Figure 1. April 1, 2003 Snowpack

Seasonal Precipitation, October 2002 - March 2003

(Averaged by Hydrologic Unit)

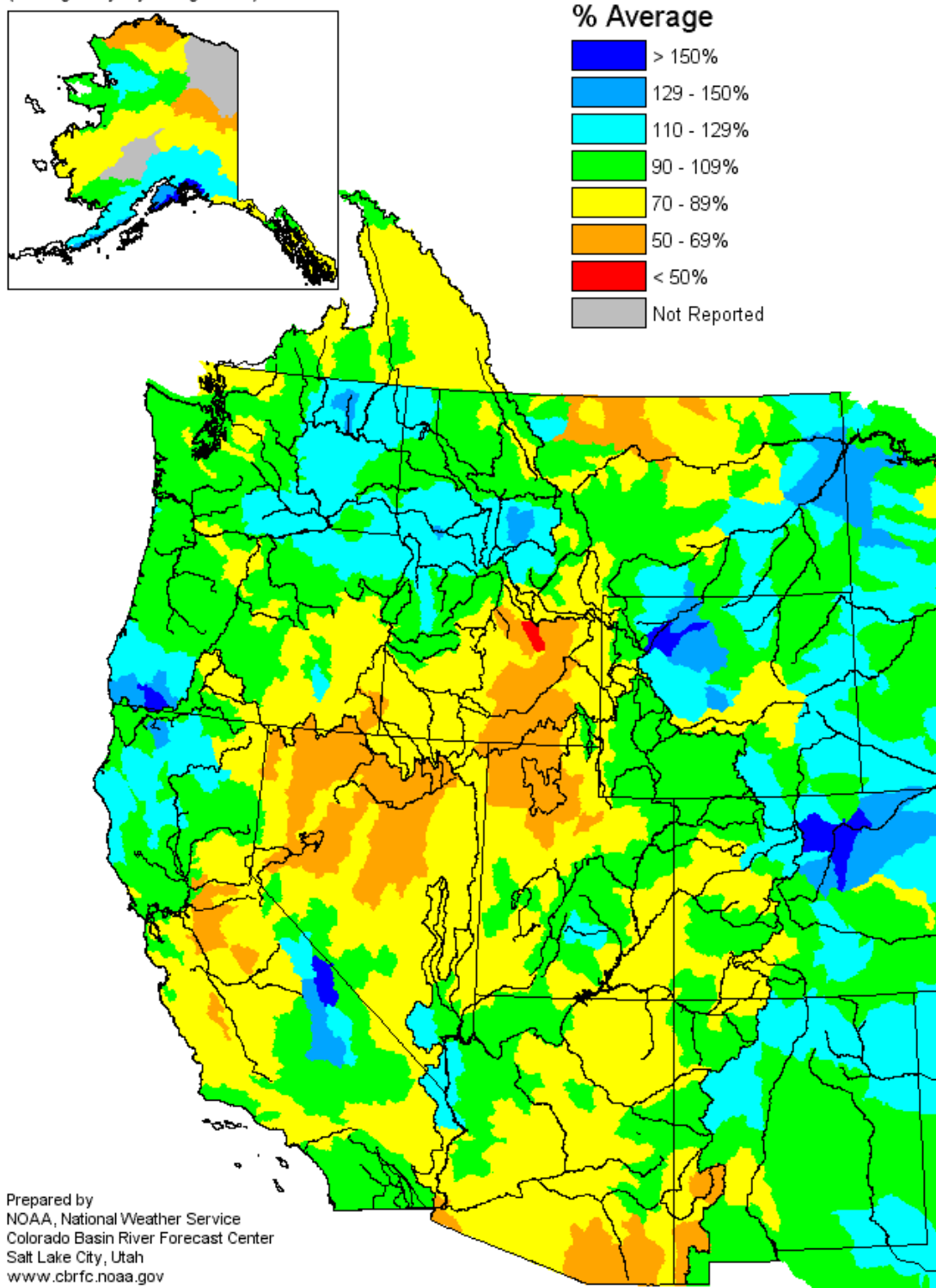


Figure 2. Seasonal Precipitation to Date Starting October 1, 2002

Monthly Precipitation for March 2003

(Averaged by Hydrologic Unit)

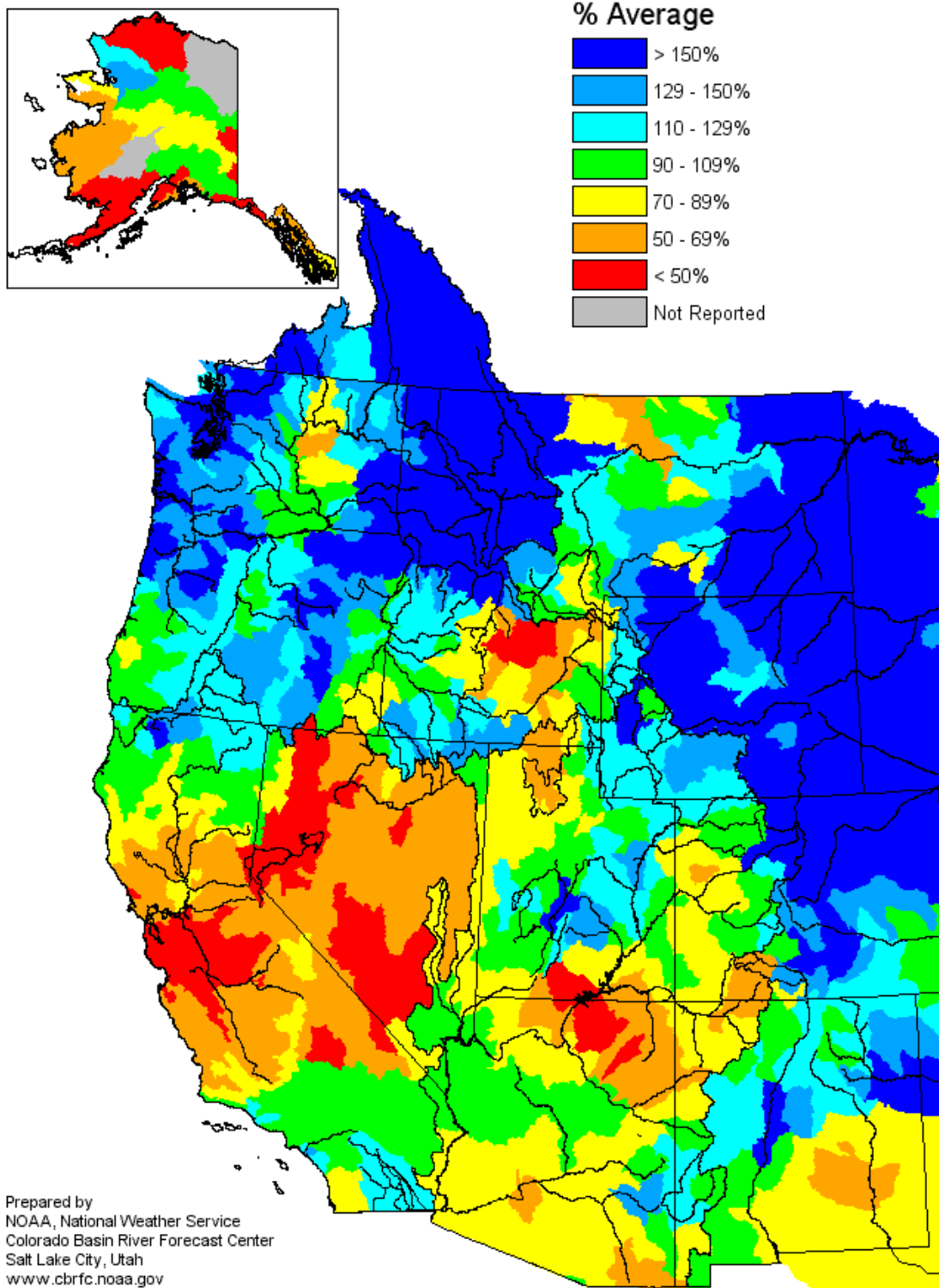
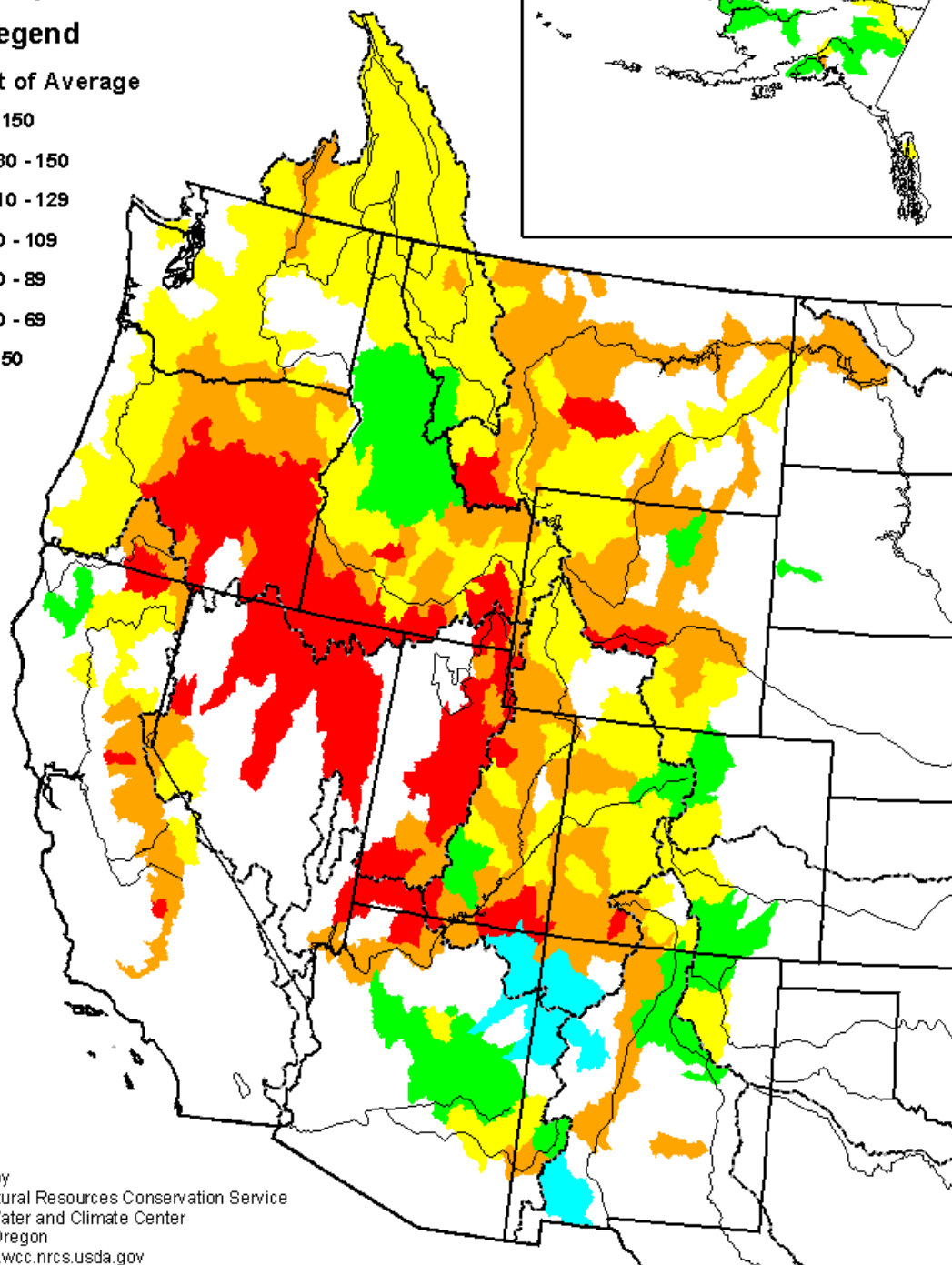
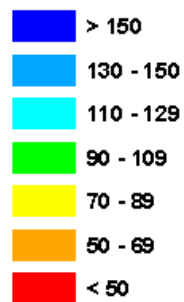


Figure 3. Monthly Precipitation - March 2003

Spring and Summer Streamflow Forecasts as of April 1, 2003

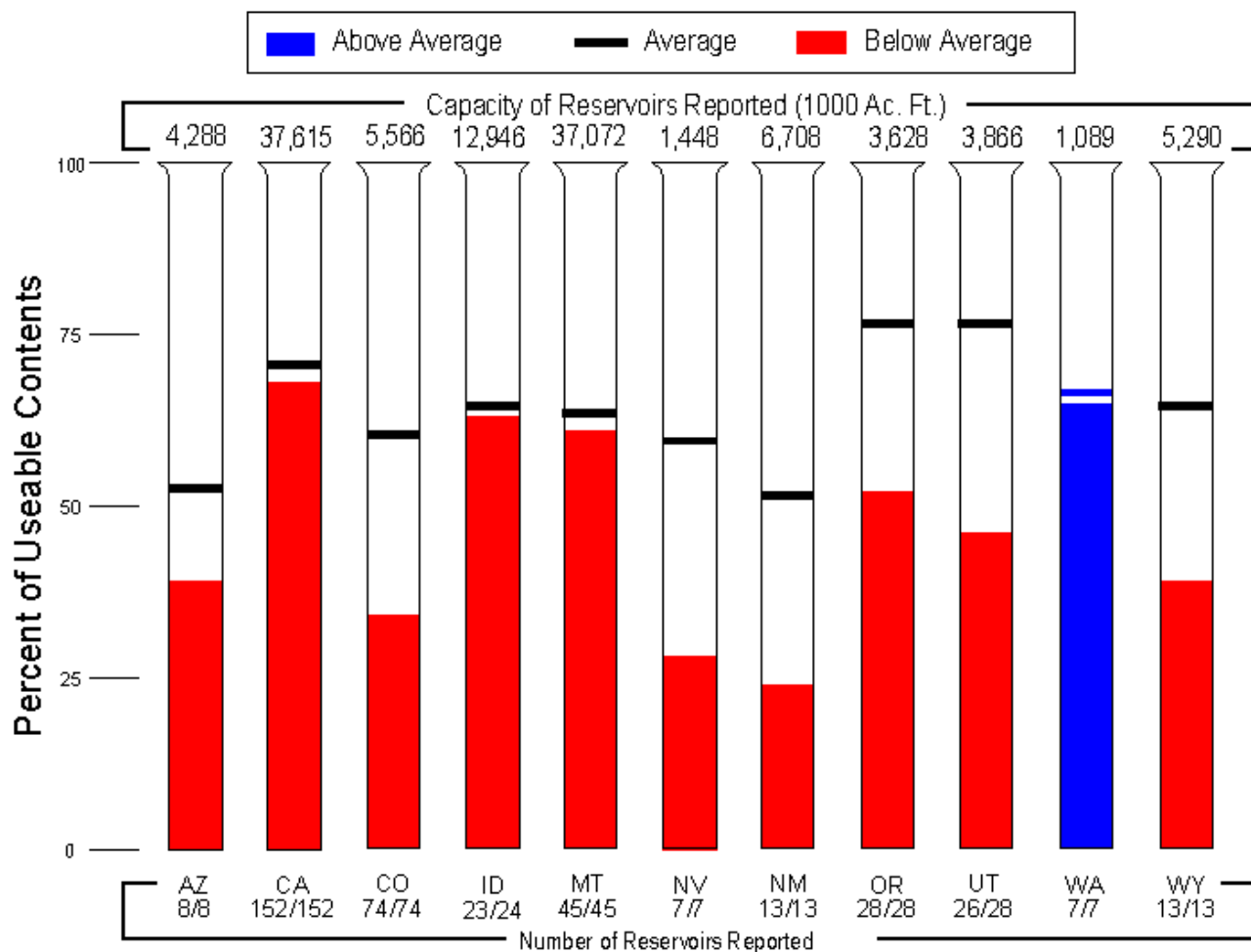
Legend
Percent of Average



Prepared by
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Figure 4. Seasonal Water Supply Forecasts - April 1, 2003

Reservoir Storage as of April 1, 2003



Prepared by: USDA, Natural Resources Conservation Service, National Water and Climate Center, Portland, OR
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Figure 5. Current Reservoir Storage - April 1, 2003